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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/602,789	06/23/2000	Edward A. Hubbard	UNTD:010	2646

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EXAMINER

COULTER, KENNETH R

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 06/21/2004

10

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/602,789

Applicant(s)

EDWARD HUBBARD

Examiner

Kenneth R Coulter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 3,5-9,13-17,19,22-26 and 30-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3,5-9,13-17,19,22-26 and 30-40 is/are allowed.
- 6) ☒ Claim(s) 41-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 41 – 48 are rejected under 35 U.S.C. 102(b) as being disclosed by Shmulik London (POPCORN – A Paradigm for Global-Computing; June 1998).

- 2.1 Regarding claim 41, London discloses a software agent program operating within a distributed device capable of processing workloads for a distributed processing system (DPS), the software agent program comprising a program of instructions for performing the program steps of:

receiving a request from a server operating the DPS to process a selected workload for the DPS in exchange for an incentive, wherein the incentive includes a number of entries to the sweepstakes determined by performance data quantifying the distributed device's performance in processing the selected workload (p. 12, third paragraph "One may think of several **motivations for one processor to provide CPU-time to another**: ... 6. **Lottery**"; p. 26, paragraph 3 "A **computelet** is an object that carries a computation intended for **remote execution**.");

determining a value of the incentive relative for resources of the distributed device for processing for the DPS (p. 13, paragraph 5 "**The market determines a fixed price for every type of commodity** (JOP or computelet), the buyers and sellers can either accept this price or seek a market with higher return.");

authorizing processing of the selected workload by the distributed device in response to the value of the incentive (p. 13, paragraph 5 "The market determines a fixed price for every type of commodity (JOP or computelet), the **buyers and sellers can either accept this price or seek a market with higher return.**"; p. 13, last paragraph "Each buyer and seller have their own trading policy, and the matching of a seller to a buyer must meet the terms of these policies.");

determining the performance data from processing the selected workload (p. 26, last paragraph through p. 27, first paragraph "the **computation-packet encapsulates** in addition **all information regarding the local processing** of this computelet: how it gets constructed, the price offered for it, how it is handled locally when the answer arrives, how it is verified, **what if the remote computation fails somehow, etc.**");

determining a number of machine generated entries corresponding to the performance data (p. 26, last paragraph through p. 27, first paragraph; p. 13, last paragraph "Each buyer and seller have their own trading policy, and the matching of a seller to a buyer must meet the terms of these policies."); and

sending the performance data and the number of machine generated entries to the server (p. 26, last paragraph through p. 27, first paragraph "the **computation-packet encapsulates** in addition **all information regarding the local processing** of

this computelet: how it gets constructed, the price offered for it, how it is handled locally when the answer arrives, how it is verified, **what if the remote computation fails somehow, etc.**").

2.2 Per claim 42, London teaches that the value of the incentive is determined relative to using resources of the distributed device for processing other than for the DPS (p. 12, paragraph 2 "Our basic goods are 'JOPs' – Java Operations. ... Each computelet takes some number of JOPs to execute, and the **price for the computelet is proportional to the number of JOPs it actually took to compute remotely**. This is measured (or actually, approximated) using a **simple benchmark we piggyback on each computelet.**").

2.3 Regarding claim 43, London discloses that the authorizing step is performed by an algorithm within the code of the software agent program without a user intervention (p. 38, paragraph 6 "software agents"; p. 13, last paragraph "Each buyer and seller have their own trading policy, and the matching of a seller to a buyer must meet the terms of these policies.").

2.4 Per claim 44, London teaches a software agent program operating within a server managing a plurality of distributed devices coupled through a network for processing workloads for a distributed processing system (DPS), the software agent program comprising a program of instructions for performing the program steps of:

sending requests to one of the plurality of distributed devices to process a selected workload for the DPS in exchange for an incentive, wherein the incentive includes a number of machine generated entries to a sweepstakes determined by performance data from the distributed device processing the selected workload (p. 12, third paragraph "One may think of several **motivations for one processor to provide CPU-time to another**: ... 6. **Lottery**"; p. 26, paragraph 3 "A **computelet** is an object that carries a computation intended for **remote execution**.");

receiving machine generated entries and the performance data from the distributed device (p. 26, last paragraph through p. 27, first paragraph "the **computation-packet encapsulates** in addition **all information regarding the local processing** of this computelet: how it gets constructed, the price offered for it, how it is handled locally when the answer arrives, how it is verified, **what if the remote computation fails somehow, etc.**"); and

determining whether to accept the machine generated sweepstakes entries in exchange for selected workload results from processing the selected workload in response to the performance data (p. 13, last paragraph "Each buyer and seller have their own trading policy, and the matching of a seller to a buyer must meet the terms of these policies.").

2.5 Regarding claim 45, London discloses that the performance data includes the selected workload results (p. 26, last paragraph "The heart of a **computation-packet** is

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indeed the computelet that executes its main function.”; p. 26, paragraph 3 “A ***computelet*** is an object that carries a computation intended for remote execution.”).

2.6 Per claim 46, London does not explicitly teach that the performance data includes a processing time expended by the distributed device in completing the selected workload and generating the selected workload results.

However, London does disclose that all information regarding local processing is returned (p. 26, last paragraph “the ***computation-packet encapsulates*** in addition ***all information*** regarding the local processing of this computelet: how it gets constructed, the price offered for it, how it is handled locally when the answer arrives, how it is verified, what if the remote computation fails somehow, ***etc.***”).

All information inherently includes processing time.

2.7 Regarding claim 47, London discloses that the performance data includes a clock time at the server when the machine generated entries and the performance data from the distributed device is received by the server (p. 48, paragraph 3 “**The buyer should state a time-limit for his computelets** (to avoid platform dependency, the limit *should* be termed in JOPs rather than seconds). It is agreed that a seller can drop a computelet whose execution exceeds this period and be credited for his work.”).

2.8 Per claim 48, London teaches that the software agent program negotiates with a distributed device agent program within the distributed device processing the selected

workload using an algorithm to determine an acceptance number of machine generated entries to accept in response to the performance data (p. 13, last paragraph "Each buyer and seller have their own trading policy, and the matching of a seller to a buyer must meet the terms of these policies.").

### ***Response to Arguments***

3. Applicant's arguments filed 4/5/04 have been fully considered but they are not persuasive.

Applicant states that Examiner has failed to specifically point out where in London the invention of Claims 41-48 is found.

A more detailed rejection is found above.

### ***Allowable Subject Matter***

4. Claims 3, 5 – 9, 13 – 17, 19, 22 – 26, and 30 – 40 are allowed.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the




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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth R Coulter whose telephone number is 703 305-8447. The examiner can normally be reached on 5 4 9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 703 305-4003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KENNETH R. COULTER  
PRIMARY EXAMINER  


krc